REMARKS/ARGUMENTS

The Applicant acknowledges, with thanks, the Office Action mailed October 21, 2004. This amendment is responsive to the October 21, 2004 Office Action. By this amendment, claims 1-70 have been cancelled. Clams 71-83 have been added.

Claim 71-74 do not add new matter as the subject matter of these claims is disclosed at page 13 line 25 – page 15 line 23 of the original specification. Claims 75-78 do not add new matter as the subject matter of these claims is disclosed at page 31 line 23 – page 36 line 18 of the original specification, and Figs 22 and 23. The subject matter of claims 79-82 is not new matter as it is described at page 26 line 12 through page 28 line 21 of the original specification.

In the last Office Action, the Examiner made rejections based on 35 USC § 112 because some of the claims recited 'layer 2' and 'layer 3' switches. Accordingly, the new claims recite OSI layer 2 and OSI layer 3 where appropriate to better point out and particularly claim the invention. According to the OSI model, OSI layer 2 is the data link layer and OSI layer 3 is the network layer.

In paragraph 31 of the last Office Action, the Examiner stated that when a switch (layer 2) is acting as a router it is inherently an layer 3 capable switch because otherwise the router could not communicate with the network. Applicant respectfully disagrees, as known to those skilled in the art, a layer 2 switch operates using physical address whereas a layer 3 switch operates using network (*e.g., logical)* or IP addresses that identify locations on the network, and can employ physical address to network address mapping. Applicant is attaching two articles further explaining this distinction in the Appendix of this Office Action.

I. REJECTIONS UNDER 35 USC § 112

Claims 3-5, 26-35, 38-40, 61-70 were rejected for various reasons under 35 USC § 112. This rejection has been traversed as all of these claims have been cancelled.

II. REJECTIONS UNDER 35 USC § 102

Claims 1-3, 16, 18, 23, 30, 36-38, 51, 53 58 and 65 were rejected under 35 USC § 102(b) as being anticipated by U.S. Patent No. 5,802,333 to Melvin (hereinafter Melvin). Claims 30-65 and 65-70 were rejected under 35 USC § 102(e) as being anticipated by U.S. Patent No.

6,785,272 B1 to Sugihara (hereinafter Sugihara). By this amendment, these claims are now cancelled.

III. REJECTIONS UNDER 35 USC § 103

Claims 4, 5, 21, 22, 24-26, 28, 29, 39, 40, 56, 57, 59-61, 63 and 64 were rejected under 35 USC § 103(a) as being obvious in view of the combination of Melvin and U.S. Patent No. 6,751,191 to Kanekar et al. (hereinafter Kanekar). Claims 6-9, 15, 17, 19, 20, 27, 41-44, 50, 52, 54, 55 and 62 were rejected under 35 USC § 103(a) as being obvious based on the combination of Melvin and Sugihara. Claims 10-13 and 45-45 were rejected 35 USC § 103(a)as being obvious based on the combination of Melvin, Sugihara and Kanekar. Claims 14 and 49 were rejected 35 USC § 103(a)as being obvious based on the combination of Melvin, Sugihara, Kanekar and U.S. Patent No. 5,754,939 to Herz et al. (hereinafter Herz). By this amendment, these claims are cancelled.

IV. NEW CLAIMS 71-

A. Claims 71-74

New claim 71 recites a method for selecting a master switch from a stack of switches comprising a plurality of switches. The method determines whether at least one of the plurality of switches is an OSI Layer 3 switch. If one (or more) of the switches is a layer 3 switch, then the layer 3 switch with the lowest switch identification is selected as the master. Otherwise, the switch with the lowest identification number is selected.

By contrast, Melvin and Kanekar do not select masters, they are assigned. Sugihara has the capability to elect a master on the fly, however, Sugihara only uses a "priority index" that each switch is assigned. After a change, the master is selected by determining which switch has the highest priority index (col. 3, lines 35-41). Thus, Sugihara does not teach, suggest or motivate, determining whether any of the switches in the stack are OSI layer 3 switches, nor does it teach, suggest or motivate selecting the OSI layer 3 switch with the lowest switch identification when the stack has one or more OSI Layer 3 switches.

Claims 72-74 directly depend from claim 71 and therefore contain each and every limitation of claim 71. Therefore, for the reasons just set forth for claim 71, new claims 72-74 are neither anticipated nor obvious in view of the cited prior art.

B. Claims 75-78

New claim 75 recites a method for distributed OSI layer 3 packet processing for a stacked switch configuration having a plurality of switches, wherein at least two of the plurality of switches is an OSI Layer 3 switch and at least one of the plurality of switches is an OSI layer 2 switch. The head router for every OSI Layer 3 switch is assigned to the OSI Layer 3 switch itself. Every OSI Layer 2 switch is assigned the closest OSI Layer 3 switch as a head router. A one of the at least two OSI Layer 3 switches is assigned as the master switch for stacked switch configuration.

A benefit of assigning each layer 3 switch as a head router and layer 2 switches to the nearest layer 3 switch is that it partitions the switching domain and distributes switching among the layer 3 switches. This distribution reduces load and provides more efficient layer 3 processing. By contrast, all layer 3 processing in Melvin and Sugihara are performed by the master switch. The aforementioned deficiencies in Melvin and Sugihara are not remedied by any teaching of Kanekar. Furthermore, Kanekar is non-analogous because the system in Kankear has one set of physical ports served by multiple processing units, as opposed to the present invention which has multiple switches, each having their own ports. Claim 76-77 further illustrate the distribution of the layer 3 switching by reciting that the source MAC address of an ARP response packet is the nearest layer 3 switch when a layer 2 switch responds, or the MAC address of the layer 3 switch that sends the response.

Furthermore, claims 76-77 recite steps for receiving an ARP request received by a switch on the stack from a non-stack port. The response to the ARP request packet having the MAC address of the head router (*e.g.*, OSI Layer 3 switch itself or the nearest OSI Layer 3 switch) as a source MAC address. Similarly, claim 78 recites a method for sending an ARP request wherein one switch broadcasts the ARP to all other switches in the request, the other switches being responsive to the broadcast to sending a ARP request packet to their non-stack ports, the ARP, the ARP request packet having a route interface IP address as a sender IP address and a MAC address of the header router as the sender MAC address.

C. Claims 79-83

New claim 79 recites a stacked switch system having a plurality of switches. The plurality of switches comprises means for maintaining a local switch database, the local switch database comprising the MAC address and port identification of MAC addresses learned locally; and means for maintaining a remote switch database, the remote switch database comprising the MAC address and switch node identification of addresses learned through another switch node. The prior art does not maintain separate databases for addresses learned locally and addresses learned through another switch node. In fact Kanekar teaches away from this aspect as Kanekar teaches that all of the tables throughout the stacked switch system have synchronized databases, which would be impossible to do because addresses local to one node are remote to the remaining nodes.

V. CONCLUSION

For the reasons set forth above, claims 71-83 are neither anticipated nor obvious in view of the cited prior art. If there are any fees necessitated by the foregoing communication, please charge such fees to our Deposit Account No. 50-0902, referencing our Docket No. 71795/10961.

Respectfully submitted,
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